Eulimella carminae spec. nov. (Gastropoda: Pyramidellidae) from Southern Spain

Eulimella carminae spec. nov. (Gastropoda: Pyramidellidae) del sur de España

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Recibido el 26-II-1997. Aceptado el 9-VIII-1999

ABSTRACT

A new species of the genus *Eulimella* coming from circalittoral bottoms off Almería and Málaga (South Spain, Alborán Sea) is described. This new taxon is compared to others Mediterranean and East Atlantic species of this genus with the same colour pattern, with a brownish spiral band on the lower part of each whorl.

RESUMEN

Se describe una especie nueva del género *Eulimella*, procedente de fondos circalitorales de Almería y Málaga (sur de España). Dicha nueva especie se compara con otras del mismo género del Mediterráneo y Atlántico oriental que presentan un mismo patrón de coloración, consistente en la presencia de una banda espiral de color castaño en la parte inferior de las vueltas.

KEY WORDS: *Eulimella*, new species, Pyramidellidae, South Spain
PALABRAS CLAVE: *Eulimella*, especie nueva, Pyramidellidae, sur de España.

INTRODUCTION

In the review of the Pyramidelloidea of the Spanish Mediterranean coasts of PEÑAS, TEMPLADO AND MARTÍNEZ (1996) some doubtful forms were not included. We describe here one of these forms (several shell coming from South Spain) as a new species. We assigned this species to the genus *Eulimella*, according to the criteria of AARTSEN (1994). This species presents a columellar fold instead of a pronounced columellar tooth, as in the species of the genus *Syrnola*. The specimens studied do not fit well with any of the Mediterranean species of *Eulimella*, revised by AARTSEN (1994), neither with any known East Atlantic species of the genus, recently studied by PEÑAS AND ROLÁN (1997) and AARTSEN, GUITTENBERGER AND GOUD (1998).

MATERIAL

Apart from the shells of the new species, we have studied several hundreds of specimens of *Eulimella* from the

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Mediterranean sea, from the European Atlantic coasts, and from West Africa, in order to compare. We have also examined the type specimens of *Turbonilla smithi* Verrill, 1880, from Northwestern Atlantic.

SYSTEMATICS

Family Pyramidellidae Gray, 1840
Genus *Eulimella* Forbes and MacAndrew, 1846

Eulimella carminae spec. nov. (Figs. 1-5)

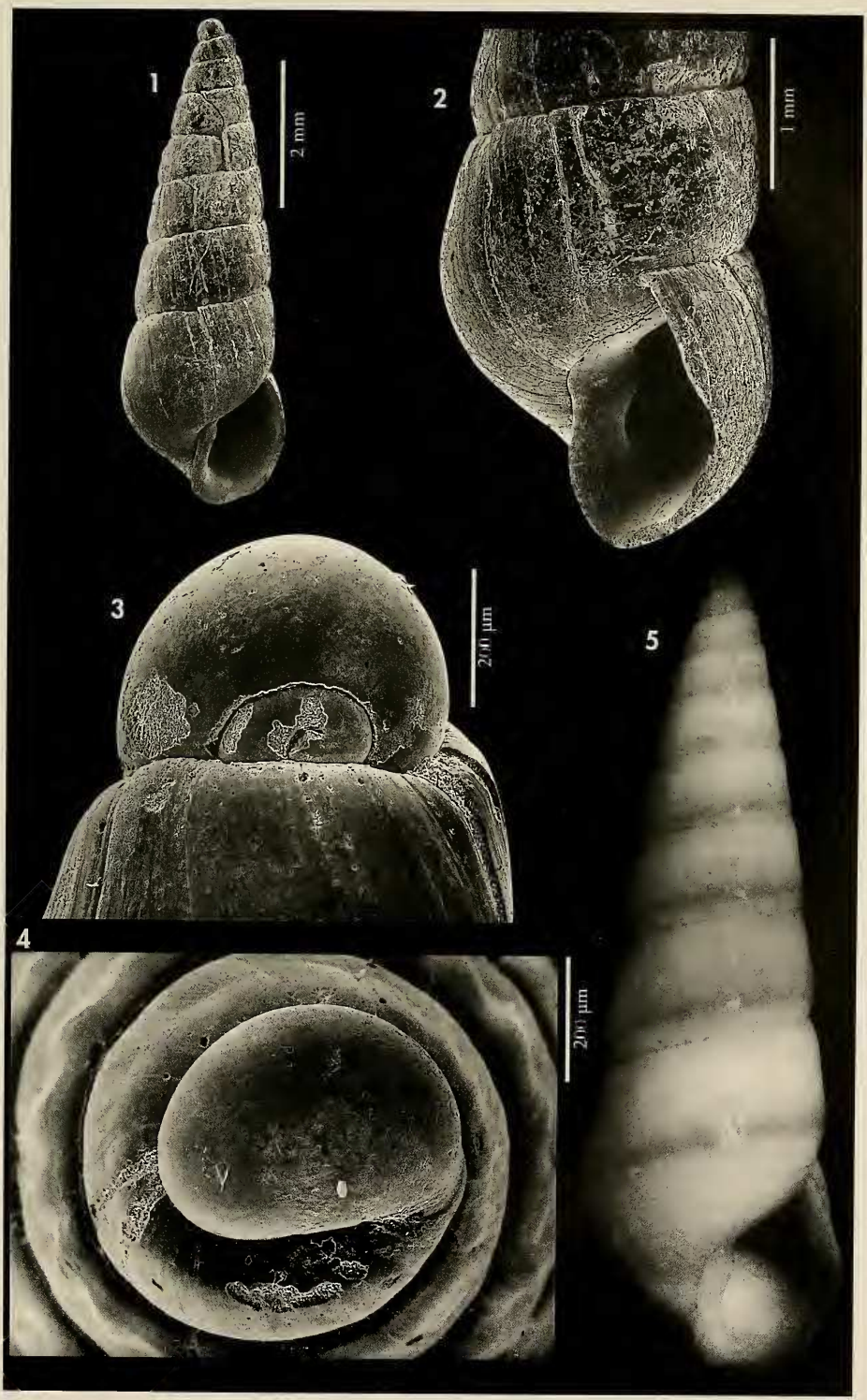
Type material: Holotype and 2 paratypes from type locality (in Museo Nacional de Ciencias Naturales, Madrid, catalogue number: 15.05/28865). Other paratypes from type locality in coll. A. Peñas (18), coll. D. Moreno (5), and coll. J. L. Martínez (2). All type material are empty shells.
Type locality: Piedras del Charco, Almería Bay, Southeast Spain (36° 46,70′ N - 02° 16,40′ W), 50 m in depth (May, 1995).
Other material examined: 2 empty shells, Roqueo del Almirante, Mijas Costa, Málaga, South Spain, 22-24 m in depth (coll. A. Peñas).
Etimology: This species is named after Mrs. Carmina Padilla, wife of the first author.

Description: Shell tall, thick, with regular profile and a rather pointed apex. Spire slightly cyrto-conoid. White colour in the adapical half whorl; abapically light rose with a brownish band in the middle. Dead shells are whitish.

The holotype (Figs. 1-4) has 7 postlarval whorls, almost straight in profile. Suture moderately deep, making an angle of about 80° to the main shell axis. The shell surface appears smooth, but when it is examined with reflected light shows slightly and closely set of prosocline growth-lines (angle of about 10° to main axis), and spiral striae barely detectable. Protoconch of about 480 μm in diameter, planispiral, with 2 smooth whorls in the same plane, and lying an angle of about 135° to main axis. It is halfway sunken into teleoconch. Aperture lozenge-shaped, pointed adapically, rounded basally. Outer lip running from just below the perifery of the last whorl, following the general outline of the shell. It then gently curved toward the base of the columella, which it does not join at a right angle. There is some outturning of the lip at the base of the aperture, making it flared. Final part thin, connecting to thin columellar lip. The columella is very gently curved, tilted, with a prominent fold. The columellar lip is out-turned over the umbilical groove. No true umbilicus exists. A thin parietal callus connectes to outer lip. The brownish spiral band is also appreciable inside the aperture. Dimensions of the holotype: 6.6 mm in height (H), 2.2 mm in diameter (D) (H/D= 3).

The biggest specimen studied (Fig. 5) comes from Mijas Costa, Málaga, and measures 7.85 mm. The H/D in the studied material ranges from 2.0 in young shells up to 3.0 in the biggest spe-

(Right page) Figures 1-5. *Eulimella carminae* spec. nov. 1: Holotype (height 6.6 mm), off Piedras del Charco, Bay of Almería, SE Spain, 50 m deep; 2: Detail of the columellar fold (holotype); 3: lateral view of the protoconch (holotype); 4: top view of the protoconch (holotype); 5: Shell (height 7.85 mm) from Mijas Costa, Málaga, S Spain, 24 m deep.
(Página derecha) Figuras 1-5. Eulimella carminae *spec. nov. 1: Holotipo (altura 6,6 mm), de Piedras del Charco, bahía de Almería, SE de España, a 50 m de profundidad; 2: Detalle del diente columelar (holotipo); 3: Vista lateral de la protoconcha (holotipo); 4: Protoconcha vista desde arriba (holotipo); 5: concha (altura 7,85 mm) de Mijas Costa, Málaga, S de España, a 24 m de profundidad.*


1
2 mm
2
1 mm
3
200 µm
4
200 µm
5

cimens. The protoconch diameter ranges from 460 to 480 μm.

Habitat: The specimens of this new species come from shell grit, collected in scuba diving by Diego Moreno at Piedras del Charco, in Almeria Bay (Southeast Spain). The bottom at this place consists in a slightly raised horizontal rocky slab, between 45 and 50 m in depth, where a typical coralligenous biocoenosis is present. The more conspicuous sesile species were the gorgonians *Paramuricea macrospina* (von Koch, 1882), *Leptogorgia sarmentosa* (Esper, 1791) and *Eunicella* sp., and sponges of the genus *Axinella*.

DISCUSSION

We have been studied a large amount of material of *Eulimella* coming from the Mediterranean and Eastern Atlantic (see PEÑAS *ET AL.*, 1996; PEÑAS AND ROLÁN, 1997, 1999). The new species here described is clearly different from any other species found in this material or described in the literature.

Eulimella carminae spec. nov. is charasteristic by its white-rose backgrown colour with a distinctive brown band. Other Mediterranean and East Atlantic species of *Eulimella* with a similar colour pattern are: *Eulimella unifasciata* (Forbes, 1844), *E. neoattenuata* Gaglini, 1992, *E. minuta* (H. Adams, 1869), *E. calva* Schander, 1994, *E. similminuta* Peñas and Rolán, 1997, *E. verduini* Aartsen, Guittenberger and Gould, 1998, *E. vanhareni* Aartsen, Guittenberger and Gould, 1998, and *E. robusta* Aartsen, Guittenberger and Gould, 1998. Only the first three species above mentioned are simpatric with *E. carminae* spec. nov. in the Alborán Sea. The others ones are only known from different areas of West Africa.

E. minuta, from the Mediterranean and Eastern Atlantic, is clearly different, being smaller (up to 4 mm) and pupoid in form. In the other hand, we have compared many specimens of *Eulimella unifasciata*, *E. neoattenuata* and *E. carminae* from circalittoral bottoms off Alborán Sea, and these three species are clearly distinguishable without intermediate forms.

Eulimella unifasciata, widely distributed throughout the Mediterranean and Eastern Atlantic, is more slender (H/D (4 in the biggest specimens), and its protoconch is smaller, with a diameter of about 375 μm. The type specimens of this species have been lost (Gofas, *pers. com.*). Therefore, until material from the type locality (circalittoral bottoms off the Aegean Sea) will be available for study we follow the criteria of AARTSEN (1994) on the identity of this taxon (see also SCHANDER, 1994; PEÑAS *ET AL.*, 1996; PEÑAS AND ROLÁN, 1997; AARTSEN *ET AL.*, 1998, among others). We have also examined the two syntypes of *Turbonilla smithi* Verrill, 1880, a quite similar species described from Northwestern Atlantic, and we conclude that this taxon is a junior synonym of *Eulimella unifasciata*, as AARTSEN (1994) suspected.

Eulimella neoattenuata, known from the central and Western Mediterranean, is considerd by us as a valid species. It reachs a height of 5. 5 mm in adult specimens, with a teleoconch of 8-10 whorls, and it is more slender (H/D ranging from 3.14 to 3.46) (see also GAGLINI, 1992). Its protoconch is smaller, with a diameter of 325 μm. A more complete discussion on all these taxa is given in a separate paper (PEÑAS AND ROLÁN, 1999).

None of known west African species of *Eulimella* with the same colour pattern can be confused with *E. carminae*. *E. vanhareni* and *E. verduini* have been recently described by AARTSEN *ET AL.* (1998) from deep bottoms off Canary Islands. The first one is more slender (H/D≈ 4) than *E. carminae*, its protoconch is smaller, and the growth-lines are opisthocline. *E. verduini* is smaller (up to 4 mm in lenght), with clearly concave whorls, and much more accentuated orthocline growth-lines (AARTSEN *ET AL.*, 1998). *E. robusta* was described by AARTSEN *ET AL.* (1998)

based on three whitish shells collected in Mauritania. We have examined several specimens clearly belonging to this species, from Western Sahara to Guinea Conakry, and they present a distinc brownish band in the lower part of each whorl. But *E. robusta* have a bigger shell (up to 10 mm in lenght, H/D= 2.6) than *E. carminae*, with somewhat smaller protoconch (450 μm), and with a sligth colomellar fold. The teleoconch of specimens of both species of the same height (7.5 mm) have 7 whorls in *E. robusta* whereas in *E. carminae* have 8 whorls.

Eulimella calva, known from Angola to Ivory Coast, is smaller, more pupoid, and lacks columellar fold (SCHANDER, 1994). *E. similminuta*, only known from Senegal, has smaller protoconch (300 μm) and lacks columellar fold (PEÑAS AND ROLÁN, 1997).

AKNOWLEDGEMENTS

We are grateful to Diego Moreno for loan the shell-grit from the type locality, and to José Luis Martínez for this off Roqueo Almirante. The SEM photographs were done by José Bedoya (Electron Microscopic Unit at the Museo Nacional de Ciencias Naturales, Madrid). We are also indebted to T. Nickens and M. G. Harasewych (National Museum of Natural History, Smithsonian Institution, Washington) for the loan of the type specimens of *Eulimella smithi*. We thank to José Templado his helpful comments on the manuscript.

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